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MM Docket 99-325

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October 2, 2003

APR 21 2004

Federal Communications Commission
Office of the Secretary

Mary Beth Murphy, Esq.
Chief, Policy Division
Media Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Dear Ms. Murphy:

In accordance with our recent telephone conversation, I am enclosing a transcript of an interview of Robert Struble, Chief Executive Officer of iBiquity, by Mr. Phil Leigh, former Vice President of Raymond James & Associates, on Inside Digital Media. In this interview, Mr. Struble identifies one of the benefits of digital radio is the ability of listeners to download selected material to hard drives built into their digital receivers. (See pages 17 to 19 of the transcript.) Mr. Struble indicates that the digital radio receivers will be capable of scanning the airwaves for selected music and other programming and recording it without any intervention by the listeners. He also states that these services will be available not only in listeners' homes, but also in their cars.

As RIAA indicated during our meeting with you, it is this kind of ability to copy sound recordings in a manner that transforms digital radio broadcasts into a jukebox with an unlimited library of songs that threatens to be the next wide-scale piracy to ravage the recording industry. Digital radio receivers will be able to parse digital broadcasts on a song by song basis, thereby enabling listeners to copy the entire repertoire of individual artists with the push of a button and without ever listening to a radio station's broadcast programming. These devices could also permit listeners to transfer songs to other devices for individual or serial copying and distribution over the Internet. While Mr. Struble describes the ability to record material as one involving a "buy," which presumably would require listeners to purchase the recording rights, imposing a purchase requirement is feasible only if the broadcast material is encrypted at the source (not just a scrambling of the signal). If the broadcast source material is unencrypted, listeners will be able to record the material without obtaining any authorization or making any payment. Finally, Mr. Struble indicates that he expects these radios to be available by the middle of next year.

As I indicated during our conversation, RIAA believes that this interview reinforces its concerns that the launch of digital radio will create a vast opportunity for

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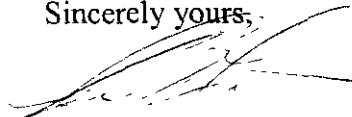
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the exploitation of recorded music in ways that ignore the intellectual property interests of the recording labels and the performing artists and that deprive them of legitimate compensation. Since the Commission is in the position to authorize the use of digital transmission systems, RIAA urges it to carefully consider the deleterious effect which an unencrypted digital radio transmission could have on related industries and to require that any digital system, including the iBiquity system, include encryption at the source. Although RIAA does not believe that the Commission should prescribe any particular encryption system or technology, RIAA strongly urges the Commission to require encryption in any FCC-licensed digital radio transmission standard. RIAA believes such an encryption system can be developed cooperatively among the affected industries.

If you have any questions concerning this interview or wish to discuss further RIAA's concerns or position, please let me know. We would also appreciate hearing from you as to the status of the staff work and the prospects for some Commission action on this most important issue for the recording industry. As RIAA indicated during our meeting, it is very concerned about the sale of radio receivers with functionality that encourages copying inconsistent with content holders' intellectual property rights and believes that the best time to address this issue is before such radio receivers become widely used. Thank you again for your time and help on this matter.

Sincerely yours,



Theodore D. Frank
Counsel for Recording Industry
Association of America

cc(w/o enc.): Steven Marks, Esq.

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RECORDING INDUSTRY ASSOCIATION TAPE TRANSCRIPTION

Transcribed from tape provided to Alderson Reporting
September 5, 2003

1 MR. LEE: Okay. Phil Lee with another edition of
2 Inside Digital Media. Today's guest is Bob Struble, who is
3 the chief executive officer of a company called iBiquity.
4 Can you hear me okay, Bob?

5 MR. STRUBLE: Sure can, Phil.

6 MR. LEE: Okay, Bob. Why don't you just tell us,
7 you know, give us the 30-second or whatever you would call
8 it, the 10-floor elevator explanation, elevator ride
9 explanation, of what iBiquity is, and then if you could give
10 us a short bio on yourself, I'd appreciate that.

11 MR. STRUBLE: Sure. iBiquity is the company that
12 was set up by radio broadcasters to develop technology to
13 move AM and FM radio broadcasting from analog to digital, so
14 much like everything else in the consumer electronics world,
15 radio is not going to be the only analog medium, so like
16 albums went to CDs and VCR tape went to DVDs and TV is now
17 digital. Radio will be digital as well, and we're
18 essentially the company that was set up to develop that
19 technology which is branded as HD radio.

20 I've been the CEO of the company since we spun it
21 out of CBS Broadcasting about six years ago. It was a small
22 internal science project, if you will, with a few folks and
23 we've since spun it out, raised a bunch of capital from
24 other major broadcasters and venture capitalists and are set
25 up as a stand-alone now.

1 MR. LEE: When was the company formed?

2 MR. STRUBLE: The company was formed as a
3 partnership back in the early '90s, '90, '91, and I'd say
4 the first five or six years again were more of a science
5 project type of feel research going on, core development,
6 and sort of the finalizing of the technology of the
7 commercialization.

8 MR. LEE: And the funding came from CBS Radio?

9 MR. STRUBLE: The initial funding came from
10 actually three places: a partnership of Gannett, the
11 publishers of USA Today; CBS; and Westinghouse, and those
12 were two separate companies back in the early '90s. They
13 came together in the mid-'90s.

14 MR. LEE: Okay. And then since then where has the
15 funding come from?

16 MR. STRUBLE: The funding has come from many of the
17 large broadcasters, every one of the top 12 radio
18 broadcasters, and 15 of the top 25 are investors in our
19 company, so a lot has come there. Other sources include the
20 classic venture capital. We have a little bit of an East
21 Coast flavor, so it's JP Morgan Partners, it's Pequot,
22 Grotech, Whitney, a few others down the line.

23 MR. LEE: Okay. Now is Clear Channel an investor
24 here?

25 MR. STRUBLE: Clear Channel is a big investor in

1 the company, yeah.

2 MR. LEE: Okay. Who's the second largest chain,
3 video chain?

4 MR. STRUBLE: Infinity, which is CBS, or Viacom
5 now, and they have also a large stake in our company from
6 that original seed capital.

7 MR. LEE: Okay. So of all these group chains, the
8 majority of them are investors?

9 MR. STRUBLE: That's accurate, yeah, every one of
10 the top 12 so, you know, run down Clear Channel, Infinity,
11 ABC, Disney, Intercom, Cox, Radio One, Citadel, on down the
12 line. They've all got a little bit of the pie.

13 MR. LEE: Okay. And you've been with the company
14 since the early '90s.

15 MR. STRUBLE: No, I was asked actually by Mel
16 Karmazin back in the CBS days to pick it up in the mid-'90s.

17 MR. LEE: Okay. And you worked for Mel Karmazin at
18 CBS?

19 MR. STRUBLE: Worked at CBS, that's right.

20 MR. LEE: How long were you at CBS?

21 MR. STRUBLE: Well, actually I was there when it
22 was at Westinghouse, so I joined in '94, got this business
23 in mid- to late '96, so a couple of years before this came
24 around I had a bunch of other technology businesses inside
25 CBS, and this one, because of their great investments in

1 media, became very significant and strategically important
2 so we got rid of all that other stuff and focused our
3 attention on this.

4 MR. LEE: So again you joined this company in the
5 mid-'90s?

6 MR. STRUBLE: Yeah, summer of 1996.

7 MR. LEE: Okay. And how long did you say you were
8 there at CBS prior to that, two years?

9 MR. STRUBLE: A couple of years before that doing
10 strategy, MNA, and operational management, I'd got a bunch
11 of small technology businesses

12 MR. LEE: And then prior to that at Westinghouse?

13 MR. STRUBLE: Prior to that, no, actually prior to
14 that at a chemicals company in Cleveland called MA Hanna,
15 prior to that with McKinsey and Company, and then you got to
16 go all the way back to business school days.

17 MR. LEE: All right. So out of business school you
18 went to McKinsey and Company, the prestigious consulting
19 firm, right?

20 MR. STRUBLE: So they told me, yeah.

21 MR. LEE: So sometimes we do have college students
22 listening here, so what kind of education did it take to get
23 where you are?

24 MR. STRUBLE: I'm actually an engineer from way
25 back when, chemical engineer at MIT. I was trained and

1 actually did engineering surprisingly enough right out of
2 school, was making in managing plants which made hydrogen
3 peroxide back in the 1980s and then went back and got an MBA
4 from Harvard and on to McKinsey and on down the line.

5 MR. LEE: Okay. So the hydrogen peroxide you made
6 in Cleveland?

7 MR. STRUBLE: No, actually in Houston on the ship
8 channel and over in Belgium in Brussels, with a Belgian
9 company called Solvet.

10 MR. LEE: Well, that's quite an impressive
11 background, Bob.

12 MR. STRUBLE: Seems like a long time ago now
13 though, Phil.

14 MR. LEE: Well, you know, time flies, but anyway
15 now you've got digital radio and you've been there at
16 iBiquity since 1996, so seven years now, and why don't you
17 go ahead and start your presentation?

18 MR. STRUBLE: Sure, we'll go right on to the first
19 page, and again to go back to the beginning, the basic
20 premise of the company is that radio is not going to remain
21 the only analog medium in a world that's fully digital.
22 Everything else is already digital or on a very clear path
23 to digital, and where the company, again as we talked, which
24 was set up by radio broadcasters to do that, transition in a
25 way

1 MR. LEE: Let me just point out as a point of
2 clarification. If you go to view, you should be able to
3 enlarge this to the whole screen.

4 MR. STRUBLE: I could, okay. Should I do that? Do
5 you want me to do that?

6 MR. LEE: Yeah, go ahead.

7 MR. STRUBLE: Okay, full screen, great. And so we
8 were the company set up by radio broadcasters to do that.
9 We're in a unique position in that we're the only company
10 that's doing this. There used to if you want to get into
11 the details be three separate companies that were
12 developing digital radio technology for AM and FM. We've
13 merged two of them together, we acquired the technology of
14 the other one, and we are now the sole developer and the
15 only technology which has been approved by the FCC, so we're
16 essentially the standard for radio broadcasting.

17 The design of the technologies is directed to move
18 AM and FM broadcasting to digital in a way that makes sense
19 for radio broadcasters and consumers. It's still a
20 fantastic business and we've got to do that transition in a
21 way that is seamless, so we don't have radios that don't
22 work, we don't want people looking for their favorite
23 stations, we don't want stations to lose equity in dial
24 position or in call letters, so everything is designed to
25 have a very seamless transitions.

1 And there's reasons to go digital. It's not just
2 a way to go digital because it's digital. We'll talk about
3 some very significant consumer broadcaster advantages
4 centered around

5 MR. LEE: Again just as a point of reference for
6 me, some years ago I read that book by David Brinkley's son,
7 Defining Vision.

8 MR. STRUBLE: Yeah, on the television side.

9 MR. LEE: Yeah, and what he did is he did a good
10 job of describing the process of getting a standard for high
11 definition television, and what I got out of that was not
12 only was there a lot of technology involved, but there was a
13 lot of politics involved.

14 MR. STRUBLE: Oh, absolutely true, absolutely true.

15 MR. LEE: And I guess that once the standard gets
16 defined, whoever has got the control of the standards is in
17 a good position. So are we seeing the same sort of thing
18 here?

19 MR. STRUBLE: I think we are and I think it's a
20 very good analogy because in some perhaps counterintuitive
21 way radio has enjoyed an advantage of being last, because we
22 as a company were able to take a look at how the digital
23 television transition went and sort of say, hey, that was a
24 good thing, let's try to replicate that, or that particular
25 aspect was not so good, let's try to avoid that.

1 So some of the pitfalls you saw on the TV side,
2 most notably a standards fight, we've been able to avoid and
3 we've done that through, as we talked about, a little bit of
4 MNA activity to clear the playing field of multiple
5 technology developers. And I think that that is, if you
6 look at the television process, just to go back to the FCC,
7 I think that the time frame was 12 years start to finish.
8 We got through in four. So we attribute that a lot to there
9 was a lot of thinking which went into what you would call
10 either the political or the regulatory aspects of the
11 business to make sure we addressed those in a strategic and
12 tactical way.

13 MR. LEE: But I guess I'm getting the and I may
14 be interpreting this incorrectly but I think the important
15 point that you're making here is that that standard is
16 established and you guys are in the driver's seat, is that
17 right?

18 MR. STRUBLE: That's exactly right. I mean, if you
19 think about radio again, and we were encouraged by the
20 government bodies and by industries to consolidate this
21 developing industry because you can't imagine multiple
22 standards propagating in radio. When you get in your car in
23 New York and drive to Boston you want to make sure your
24 radio works, so the concept of multiple AM and FM digital
25 radio standards propagating was not one that anybody was

1 excited about, and we were sort of charged by the
2 industries, by the regulatory bodies themselves, with
3 clearing the playing field, if you will, so that there could
4 only be one technology which was considered.

5 And I think there was benefit as well to do that
6 because we took again three different companies, got the
7 best of the best technology, and I think now broadcasters
8 and consumers are looking at a really superior solution
9 because we took the best of several different companies'
10 efforts.

11 To continue on the chart, and we touched upon it a
12 bit, there's a political and if you want to call it
13 coalition element to building this business. You need to
14 have digital radio work, not only broadcasters excited about
15 it, but for you and me to get it, people have to build a
16 radio, so you need radio manufacturers, you need
17 semiconductor factories who build chips, you need equipment
18 manufacturers on the broadcast side, and oh by the way you
19 need car guys and Circuit City and Best Buy to sell the
20 radios, so a lot of our effort on the development side has
21 been in assembling a very broad coalition of interested
22 parties in the various industries. We've done a lot of
23 investment in others through deal-doing, but basically are
24 working with, and we have folks who want to take the
25 business forward.

1 MR. LEE: So you've got everybody committed?

2 MR. STRUBLE: We do, and we'll talk about it a bit,
3 and we think it's a great business when you get it done.
4 It's a licensing business. We spend about \$150 million up
5 front developing the technology and then anytime anybody
6 uses it, we get a small check, so think Qualcomm, think
7 Dolby, think Gemstar prior to the TV Guide acquisition. But
8 it's a growing annuity stream and it's a very large and
9 attractive market, you know, cell phones are great, Qualcomm
10 we like to compare ourselves to, it's a I haven't checked
11 recently, but a roughly \$20 billion market-capped company
12 and they have a very solid position in CDMA technology,
13 serving the attractive cell phone industry. Well, there's
14 40 million cell phones sold in this country every year,
15 there's 70 million radios, you know, there's 40 million cell
16 phones but you get CDMA, you get GSM, and our model says,
17 every one of 70 million radios will have HD radio technology
18 it, so we get a little bit excited about the value it
19 creates in potential.

20 And the good news is this is an exciting time.
21 The commercialization is real time, distinctions are going
22 on the air as we speak and radios should be on the shelves
23 shortly, so it's an exciting time in the evolution of the
24 business.

25 MR. LEE: I see your point that you don't have to

1 manufacture anything, people have to manufacture to your

2 MR. STRUBLE: That's right. We have low the
3 costs are basically people costs of developers but we're not
4 building plants or launching satellites or digging trenches,
5 we're essentially developing technology and then the
6 manufacturing, marketing, and service is largely taken care
7 of by the incumbent players, the Sonys and the Kenwoods and
8 the Panasonics of the world --

9 MR. LEE: They just design to your specs.

10 MR. STRUBLE: design the radios.

11 MR. LEE: They design to your specs.

12 MR. STRUBLE: Exactly right, and use the
13 technology, that's the thought. So, you know, you think the
14 Intel Inside or the little double D you see, well Dolby gets
15 a little small check every time they sell a radio and that's
16 the concept here. The licensing model, we like it if it
17 works.

18 MR. LEE: They get a check any time that little D
19 is used anywhere.

20 MR. STRUBLE: That's right, or same thing again
21 with -- Qualcomm's a great example. Every time you buy a
22 CMDA handset or somebody builds a CDMA bay station, Qualcomm
23 gets a check and that's the same model here.

24 We talked about, and I'm moving forward in the
25 presentation, the need for seamless technology, and the way

1 this is going to work is for an extended period of time,
2 which will be market-driven, there'll be a simulcast of both
3 the analog and the digital technology. So when a station
4 goes digital it will put that HD radio technology up along
5 side its actual analog signal, so there's 800 million radios
6 out there in this country today, those have got to be
7 supported for their lifetime so those analog signals will be
8 around and all those current radios will work.

9 If you want the great new digital, you got to go
10 out and buy the new digital radio. That will receive all
11 the old analog broadcasts for stations that haven't
12 converted and their listener, if he listens to 93.5 on his
13 way to work is going to do the same thing in a digital
14 world, it's just going to be a whole lot better.

15 So you're talking about again no radios that don't
16 work, no listeners which get lost, no stations which lose
17 brand equity in their dial position or their call letters.
18 It's a seamless transition which is driven by the
19 marketplace.

20 MR. LEE: It'll be just like the transition from
21 black-and-white to color TV.

22 MR. STRUBLE: Exactly the analogy that we use. If
23 you want the new your black-and-white TV is still going to
24 work, but if you want the color picture, go out and buy the
25 color TV, but all the old TVs still work, so that's what

1 we're trying to get done here. And again because I don't
2 know if there's 800 million of anything out there and so all
3 those radios have to be supported through an extended
4 transition period.

5 MR. LEE: Right.

6 MR. STRUBLE: Talk about some benefits, you know,
7 it's not digital, just go digital because everybody else is
8 digital. Like other consumer electronics digital product
9 conversions, there's a great advantage to going. You start
10 first with audio quality, FM's are going to sound like CDs,
11 AM is going to sound like today's FM, so you'll hear full
12 stereo and wide harmonic range and you're going to see music
13 appear again on the AM bands. We would like to believe a
14 renaissance in the band, a lot of those niche formats

15 MR. LEE: Talk radio will have to go to the
16 Internet then.

17 MR. STRUBLE: Talk radio is still going to be
18 around and those flagship AMs that do the sports and the
19 Rush and the Dr. Lauras are still going to be around, but a
20 lot of the smaller AMs who are not really competitive, don't
21 make money, we think there's a future for them in
22 programming niche formats which you can't find on the dial
23 anymore, so the blues, the reggae, the death metal, whatever
24 have you, you can make those economics work on an AM which
25 is just a lot cheaper property than an FM, which has to play

1 the mass-market types of format to make their economics work
2 at a station level.

3 So you're going to see a lot more choice and a lot
4 more, we believe, exciting formats coming back on the AM
5 band and that hopefully should be good news for those
6 broadcasters so

7 MR. LEE: This is what interests me right here.

8 MR. STRUBLE: Yeah, we think it's a great idea.

9 MR. LEE: Tell us about this wireless data
10 services.

11 MR. STRUBLE: The wireless data services, you know,
12 again it starts in the very early ages with some pretty
13 rudimentary but still value-added applications like seeing
14 the song or the artist or the CD title on the screen when
15 you're listening to it.

16 MR. LEE: That can be pretty valuable.

17 MR. STRUBLE: It's huge, and it surveys out every
18 time. It's funny, we look at the consumer research,
19 everybody says they want to know what the song is but then
20 they also say they don't want to hear the DJ talking, so you
21 know to look at the and the first radios off the line will
22 have this on it. You'll see the song, the artist, the
23 title, you'll see the station call letters, you'll see those
24 sorts of scrolling ads that you see, scrolling information
25 that you see running at the bottom of the cable news

1 channels.

2 MR. LEE: So what you're saying is that the new
3 digital radios will have a little display screen on them?

4 MR. STRUBLE: Exactly right.

5 MR. LEE: And I can't tell you how many times I've
6 heard a song and I was like, gee, that's a nice song but I
7 can't remember what the DJ said it was and I completely have
8 no idea because at the end of the song he doesn't repeat it.

9 MR. STRUBLE: Well, we're going to take care of
10 that.

11 MR. LEE: Yeah, it'll be right there on the
12 display, and that's a cool song and that'll tell me the name
13 and the artist and I can go buy it.

14 MR. STRUBLE: Yeah, and think of the obvious things
15 you want in the car too. If you want weather alerts, that's
16 scrolling. If you want traffic updates, well there's a
17 traffic button, you push traffic and instead of waiting for
18 it on the 8s there it is and it's customized to your route
19 and then further on down the line

20 MR. LEE: The traffic updates would be all of a
21 sudden the audio would change from the song to some sort of
22 traffic update?

23 MR. STRUBLE: Could do that, you know, there's
24 applications which are, you know, turn down the audio, turn
25 up the traffic update, or it could be visual or more likely

1 most cars now, not most cars but certainly in the future
2 will have nav systems, you know, just press a button to
3 update and you'll see your nav system where the traffic
4 issues are graphically on the navigation screen, just a
5 transfer of data between two devices. So we think those are
6 all very exciting applications, and then further on down the
7 line think about Tivo for radio. You like a song, you
8 hadn't heard it before, press the rewind button. You get up
9 at 10:00 but you really want to listen to Howard, well go to
10 your electronic program guide and he's there stored in your
11 hard drive. The buy button, e-commerce, all this stuff is
12 enabled with the digital technology, so we get excited about
13 that stuff.

14 MR. LEE: So what you're saying is that I could
15 just program my car radio to record my favorite programs and
16 then when I get into the car I just look and see what it's
17 recorded for me.

18 MR. STRUBLE: Exactly right, no matter what part of
19 the country you're in, with a program guide. Again, we
20 don't want to represent that that's going to be in the first
21 radios off the shelf, this will take some time, but it puts
22 you on the digital platform, which is going to enable all
23 these services.

24 MR. LEE: What about this on-demand audio, that's
25 just another thing that the platform will enable?

1 MR. STRUBLE: Yeah, think about that as again Tivo
2 for radio where you go to a program guide and you really
3 want to hear Led Zeppelin, so there's a Led Zeppelin thing
4 that will scan automatically the dial and figure out what's
5 there or even to the extent of music downloads from stations
6 as an addition probably for-fee type of service. All that
7 stuff is possible and you've got actually now a small
8 cottage industry working on a lot of these applications, e-
9 commerce again, the buy button, what better place for an
10 impulsive purchase of a concert ticket or a CD then when
11 you're hearing the song and you press the buy button on the
12 radio and that request is unbeknownst to you relayed back
13 through your cell phone to a fulfillment center and either
14 you get the download or you get the CD in the mail or the
15 concert tickets or what have you. All that stuff is
16 possible and we think it's again bringing radio into the
17 digital age.

18 MR. LEE: Bob, do you have a Tivo?

19 MR. STRUBLE: I do have Tivo. It's fantastic. Do
20 you have one?

21 MR. LEE: I agree, yeah. I've had one for, I can't
22 remember, two or three years.

23 MR. STRUBLE: A lot of folks will say it's changed
24 their lives and we believe that same potential exists with
25 radio.

1 MR. LEE: Yeah, I see your point.

2 MR. STRUBLE: The broadcast side again, you know,
3 there's two sides to the equation, those that broadcast and
4 those that receive. We talked about the consumer side but
5 there's a lot of benefits on the broadcast side. The radio
6 broadcasters are not going to be the only guys left playing
7 in an analog world and there are plenty of digital threats
8 out there that if you define radio as mobile information and
9 entertainment are looking to steal radio listeners. The
10 most public and probably well-watched right now are the two
11 satellite radio guys who have digital quality sound and a
12 lot of these features that we're talking about.

13 But it's not just there, it's anything that can
14 provide mobile information and entertainment, and that's
15 wireless Palms and that's Web-enabled phones, and anything
16 that can give you traffic, news, sports, weather, and
17 entertainment on the road is a potential competitor with
18 radio. And we're not saying we're the silver bullet, but
19 we're saying we're a necessary piece of the infrastructure,
20 which is going to allow the broadcasters to meet that public
21 demand for digital.

22 We talked about the services, you know, better
23 quality of a signal, better reliability, increased
24 programming choices on the AM band, as well as some of these
25 data features. And we think a lot of those data features

1 are going to lead to new revenue potential, you know, if you
2 press that button for traffic and it comes instantly, it's
3 going to be brought to you by somebody, and that for a radio
4 broadcaster represents new inventory which they're going to
5 sell to the same people with the same sales forces, and it's
6 a new source of revenue which gets them interested.

7 MR. LEE: This is always what's interesting to
8 business people.

9 MR. STRUBLE: You have to have a case around an
10 ROI, return on investment for the broadcasters, and we think
11 the new data revenue potential puts that in place. And we
12 talked a lot about the easy transition, to give you just
13 some numbers, the average we're seeing on a digital
14 television station conversion in a market like New York is
15 \$4- to \$5 million. The average radio station is about
16 \$100,000, so you're talking about tens of thousands versus
17 millions of dollars, and it's just an easier thing to do.
18 We use all the existing infrastructure, you roll in two
19 racks which are refrigerator size and would fit in the
20 corner of your bedroom probably, plug that in and within a
21 few days you've got a digital radio station. So from an
22 economic and sort of ease of transition standpoint, it's
23 about as good as you're going to get to transfer your
24 physical plant to digital.

25 MR. LEE: Now one of the things that really turned

1 the cable guys on to digital cable was the fact that they
2 could take the analog band with them, put six channels on
3 it. Is that something you can do for the radio guys?

4 MR. STRUBLE: The similar potential exists, but
5 remember the difference here is that we're playing with
6 exactly the same spectrum. So unlike in television where
7 the broadcaster's got a whole chunk of virgin spectrum, what
8 we're trying to do is fit the analog and digital in the same
9 allotment of spectrum, so this is all going in the AM and FM
10 band, and that limits a little bit what you can do. But
11 there are tests now being run, something's being done by NPR
12 called Tomorrow Radio which is exactly that, multiple
13 castings. So you might be listening to the symphony on
14 93.5A and you flip to 93.5B and there's your NPR report
15 morning edition, whatever, replaying again. So it's
16 repurposing existing content.

17 MR. LEE: It doubles their inventory.

18 MR. STRUBLE: It does, but it comes at a cost
19 because it all boils down to bits, and we talk primarily
20 about this ability on the FM band.

21 MR. LEE: But you're saying to the broadcaster the
22 cost is \$100,000.

23 MR. STRUBLE: We're saying to the broadcaster,
24 that's right to put it in place, but we're also saying,
25 you're going to see a loss of quality in your signal, audio

1 quality, if you want to do any sort of multi-casting. So to
2 give you the numbers, FM broadcasts at 96 kilobits a second,
3 that is CD quality. NPR might say, okay, I'm going to
4 broadcast my symphony at 64 kilobits and then I'm going to
5 do talk at 32 kilobits. Well, that 64 is not going to sound
6 as good as the 96 would, so there's a price to be paid by
7 using up the bandwidth to do other things, and you know, the
8 good news again is that's market driven.

9 MR. LEE: Yeah, but even with compression
10 algorithms?

11 MR. STRUBLE: Yeah, there's a difference. I mean,
12 it all boils down to the bits, 64 is only two-thirds of 96
13 if I'm doing two, so it's still very, very good, it's just
14 not quite as good. And that's a choice that if you're
15 playing rap or you're doing talk or you're doing something
16 that is not really discernible in sort of the highs and the
17 lows, that might be an excellent choice for you. The good
18 news is it will be up to the broadcaster to decide exactly
19 what is appropriate for their station, but the opportunity
20 is there.

21 MR. LEE: I'll tell you the reason I'm confused and
22 I'm not really challenging you, it's just the reason I'm
23 confused because somewhere I had this fixation that the
24 cable guys that won analog bandwidth over the cable and with
25 MPEG too made it into six.

1 MR. STRUBLE: Right. And the answer is, they did
2 do that. The issue that you're playing with in radio is we
3 don't have nearly as much bandwidth to work with as they do.
4 It's a question of bandwidth, pure and simple.

5 MR. LEE: Okay.

6 MR. STRUBLE: To delve a little bit deeper, and you
7 highlighted it, Phil, but some of the future sex appeal, if
8 you will, is around these applications. The device that you
9 see in the upper right there is out there. That's called a
10 Visteon navigation radio, it's got the screen there, you see
11 a weather app mocked up, which is again, you press a weather
12 button, which is probably a soft key on your software,
13 they're both in software, you're going to have the weather
14 pop up and that looks like it's the next three or four days.
15 That could be stock quotes, that could be sports scores,
16 that could be an ad that you like and you want more
17 information on, press the more information button, all that
18 stuff is there, so we talked about the time shifting, the
19 store and replay, location-based advertising coupled with a
20 GPS which again are starting to become more prevalent in
21 cars, drive past the McDonald's, have the McDonald's coupon
22 printed out to go there, all the stuff that's been talked
23 about.

24 On the interactive stuff, you know, the e-
25 commerce, buying the tickets, the music, the sports tickets,

1 what-have-you, and again to think more expansively this
2 doesn't have to be just limited to radios.

3 If you look at the broadcast spectrum, it's a very
4 cheap way for data delivery. If Microsoft is right and
5 you're going to be reading your New York Times five years
6 from now on an e-tablet and not in the printed form, well,
7 you know, guess what, you can get that content delivered to
8 you over the Internet, but if you're on the road there's a
9 radio station probably between 2:00 and 3:00 in the morning
10 that's not making a lot of advertising dollars and the New
11 York Times leases out some of that spectrum and blasts out
12 at 100 kilobits a second the New York Times to your e-
13 tablet, great application, broadcast one to many.

14 And it's going to be a great way to get data out
15 to a lot of various sources. The spectrum's already paid
16 for, the conversion costs are limited, and in terms of
17 economics the broadcasters will have an advantage in terms
18 of a sort of a cost-per-pop basis.

19 I'm getting out there, so we kind of get the
20 feeling that this is sort of akin to what PCs were in 1982,
21 you know, you got your first clunky devices and that's the
22 greatest thing in the world. We can't begin to predict
23 given the new platform, the operating system if you will,
24 and pervasive devices out there, what direction these apps
25 are going to take, but we think radio is going to have a